

### REMARKS

This paper is responsive to the Office Action dated February 21, 2008. All rejections and objections are respectfully traversed. Reconsideration is respectfully requested.

At paragraph 1 of the Office Action, the Examiner objected to the disclosure for informality. Amendments to the Specification herein are respectfully believed to meet all requirements of the Examiner in this regard. With regard to the amended text “the video destination operates at step 72 to increase the data rate of the variable bit rate stream” in the paragraph beginning at line 5 on page 11, Applicants respectfully direct the Examiner’s attention to the text shown in step 72 of the originally filed Fig. 2, specifically “INCREASE VBR STREAM RATE”. No new matter has been added.

At paragraph 2, the Examiner objected to the Drawings for failing to comply with 37 CFR 1.84. Amendments to Fig. 1 herein are respectfully believed to meet all requirements of the Examiner in this regard. No new matter has been added.

At paragraphs 4-5, the Examiner rejected the claims under 35 U.S.C. 112, second paragraph, asserting that a) “said video data” in line 12 of page 14 lacked antecedent basis, b) “delaying display of said video data” in line 13 of page 14 is indefinite, c) “transcoding said video data” in line 14 of page 14 is indefinite, and d) “storing excess received video data in at least one buffer within said video destination” is indefinite. Applicants respectfully traverse this rejection.

Applicants respectfully urge that the “video data” set forth in line 2 of claim 1 provides antecedent basis for all subsequent uses of the term “video data” within the claim. As set forth in line 2 of claim 1, the “video data” is first received in a “variable bit rate data stream at a video

source". The same "video data" is then transcoded into a "constant bit rate data stream" in line 3, received at "said video destination" in line 6, delayed from being displayed "at said destination by a delay period" at line 7, and transcoded into a "variable bit rate stream" at line 8. Similarly, the "excess received video data" stored in line 12 of claim 1 refers to the "video data" first referenced in line 2 of claim 1.

By way of explanation, the "video data" does not change in claim 1, since the visual content represented by the "video data" is not changed by the steps of claim 1. For example, in a case where the "video data" represents a live event, the visual representation of the live event by the "video data" is not changed by the "receiving", "transcoding", "delaying" and/or "storing" performed in claim 1. Similarly, in a case where the "video data" represents some type of pre-made content (e.g. a movie), the visual representation of the pre-made content by the "video data" is also not changed by the "receiving", "transcoding", "delaying" and/or "storing" performed in claim 1. This holds true for any specific type of visual content represented by the "visual data". Applicants accordingly respectfully submit that antecedent basis for all uses of the term "video data" in claim 1 is provided by the initial use of "video data" in line 2 of claim 1.

At paragraphs 6 and 9, the Examiner rejected claims 1, 3-4, 6, 8-9 and 11 for obviousness under 35 U.S.C. 103, citing the combination of U.S. patent publication number 2004/0143849 ("Costa") and U.S. patent publication number 2007/0089147 ("Urdang"). Applicants traverse this rejection, respectfully urging that 1) Costa teaches away from combining Costa with Urdang, and 2) even if Costa were improperly combined with Urdang, the resulting combination does not disclose or suggest all the limitations of the present independent claims, as further discussed below.

Costa converts VBR representations of videos into constant bit rate (CBR) or near-CBR representations, so that network traffic becomes deterministic with regard to in-progress or scheduled video communications. As described in paragraph 29 of Costa, a VBR representation is segmented into time intervals that define time windows within which the VBR representation is processed to form the CBR or near-CBR representation. Further in paragraph 29, Costa teaches that each of the time intervals may have the same duration  $\Delta T$  ("delta tau").

Urdang discloses a technique for synchronizing deliveries of information and entertainment in a communications network in which a broadcast program stream is recorded to enable a user to perform network private video recorder (NPVR) functions (e.g., rewinding, pausing, and fast-forwarding) on the programming content in the recorded program stream, and in which a delay is introduced into the transmission of the broadcast program stream to reduce "unsynchronization" between the transmission and a recorded program stream.

Costa expressly teaches that introduction of a transmission delay is disadvantageous. Specifically, in paragraph 54, Costa describes how the selection of  $\Delta T$  can impact the size of a resulting transmission delay introduced at a transmitting device where the conversion from VBR to CBR is performed:

The value of  $\Delta T$  may be selected with consideration to its *resulting delay* (which *degrades as  $\Delta T$  increases*) and its resulting ability to time-advance all Bp blocks (which improves as  $\Delta T$  increases). In some applications,  $\Delta T$  may be selected to be about one or two seconds. In other applications,  $\Delta T$  may be selected to be from ten to twenty seconds. For two-way video applications, such as two-way video/audio communications,  $\Delta T$  should be relatively small. (emphasis added)

The above highlighted text exemplifies how Costa teaches that an increased transmission delay "degrades" performance. However, the fundamental operation of the Urdang system includes *introducing a delay into the transmission of a broadcast program stream*. See Urdang Abstract

("a delay is introduced into the transmission of the broadcast program stream"), paragraph 6 ("The invention overcomes the prior art limitations by introducing a delay into the transmission of the broadcast program stream"), etc. The teachings in Costa regarding the disadvantageousness of increased transmission delay thus teach away from any modification of Costa to include the techniques disclosed in Urdang, since the Urdang system is in fact fundamentally based on introduction of transmission delay into a broadcast stream.

Additionally, even if Costa were combined with Urdang, though such combination would be improper as explained above, the resulting combination does not disclose or suggest all the limitations of the present independent claims. Nowhere in the combination of Costa and Urdang is there disclosed or suggested any method for providing video data, comprising:

- receiving video data in a variable bit rate data stream at a video source;
- transcoding said video data into a constant bit rate data stream between said video source and a video destination, wherein said constant bit rate data stream has a data rate exceeding a minimum display rate;
- receiving said video data in said constant bit rate stream at said video destination;
- delaying *display* of said video data *at said video destination* by a delay period;
- transcoding said video data into a variable bit rate stream for variable bit rate display processing to generate a display at said video destination, said variable bit rate display processing varying between said minimum display rate and a maximum display rate; and
- storing excess received video data in at least one buffer within said video destination. (emphasis added)

as in the current independent claim 1. Independent claims 6 and 11 include analogous features. In contrast to the above highlighted delaying of the *display* of video data as set forth in the present independent claims, Urdang teaches delaying the *transmission* of a broadcast in paragraph 6 as follows:

The invention overcomes the prior art limitations by introducing a delay *into the transmission of the broadcast program stream* to reduce the time period (referred to as a

"time lag") by which the transmission of the recorded program stream lags behind it. . . (emphasis added)

Moreover, as expressly described in paragraph 27, Urdang teaches that the transmission delay is introduced by a *transmitting device* 105 ("HEADEND"):

Upon receiving the composite program stream, splitter 102 duplicates the stream, and splits the resulting two identical streams such that one of them is forwarded to buffer manager 103 for broadcast, thus referred to as the "broadcast program stream." The other program stream is forwarded to acquisition/staging (A/S) processor 109 for further processing in a manner described below. ***Buffer manager 103 includes adjustable memory storage (not shown) for temporarily buffering the broadcast program stream to introduce the delay  $dt$  therein***, in accordance with the invention. Specifically, in response to a delay signal from media processor 119 (described below), which contains a measure of  $dt$  (described below), manager 103 adjusts the capacity of the memory storage and allocates an appropriate storage space for buffering the broadcast program stream ***to effect the delay  $dt$  in its transmission***. . . (emphasis added)

Thus as described in the above cited sections and elsewhere in Urdang, a *transmission delay* is introduced at a *transmitting device*. These teachings stand in sharp contradistinction to the features of the present independent claims 1, 6 and 11, which include *delaying display* of the video data *at said video destination*.

The above described deficiencies in the teachings of Urdang are not solved by combining Urdang with Costa, since Costa also includes no hint or suggestion of *delaying display* of video data *at said video destination*. Costa teaches that a VBR representation is segmented into time intervals having a duration of  $\Delta T$ , that define time windows within which the VBR representation is processed to form a CBR or near-CBR representation thereof. As noted above, paragraph 54 of Costa teaches that larger values of  $\Delta T$  result in larger amounts of delay at the point of VBR to CBR conversion. As shown in Fig. 9 of Costa, the VBR to CBR conversion is performed in the Video Server Storage 204 or 206, *prior to transmission* over the network 226 to

the Central Office 224, which then in turn transmits to premises devices 230 and 232. Thus, like the delay disclosed in Urdang, the above described “resulting delay” in the Costa system is a *transmission delay* introduced at the *transmitting device*, in contrast to the *delaying display* of video data at *said video destination* of the present independent claims.

For the above reasons, Applicants respectfully urge that 1) combining Costa with Urdang is improper because Costa teaches away from such a combination, and 2) the combination of Costa and Urdang would still not disclose or suggest all the features of the present independent claims 1, 6 and 11, and accordingly would not support a *prima facie* case of obviousness under 35 U.S.C. 103 with regard to the present independent claims 1, 6 and 11. As to dependent claims 3-4 and 8-9, they each depend from claims 1 and 6, and are respectfully believed to be patentable over Costa and Urdang for at least the same reasons.

At paragraph 10, the Examiner rejected dependent claims 2, 5, 7 and 10 for obviousness under 35 U.S.C. 103, citing Costa alone. As discussed in detail above with reference to the rejections in paragraphs 6 and 9 of the Office Action, Costa does not disclose or suggest the *delaying display* of video data at *said video destination* of the present independent claims 1 and 6, from which claims 2, 5, 7 and 10 depend. Applicants accordingly respectfully urge that dependent claims 2, 5, 7 and 10 are non-obvious over Costa for at least the same reasons as dependent claims 1 and 6.

For these reasons, Applicants respectfully request that all rejections of the Examiner be withdrawn. This application is now considered to be in condition for allowance and such action is earnestly solicited.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully

requested that the Examiner telephone Applicants' Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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Date

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